THE PUBLIC TELECOMMUNICATIONS NEWSPAPER

Current

May 31, 1993 Vol. XII, No. 10

Flatow's talk show marks a digital first

Multitudes tune in their computers; guest transmits radio via Internet

By Steve Behrens

The other day, in yet another sudden demonstration of media convergence, thousands of people apparently listened to NPR's *Talk of the Nation* on their computers.

Ira Flatow, host of the Friday science edition of the talk show, knows there were lots of computer listeners because some 400 of them queued up to talk back to him—through microphones attached to their computers—and hundreds of others sent text messages by electronic mail (address: IRA@RADIO.COM).

It was a first for live two-way talk radio, said Carl Malamud, founder of a one-man computer radio network, who was Flatow's guest May 21. "In terms of hooking up the land of the radio to the land of the computer network, it's the first time it's ever been done," he claimed.

The show not only went out over NPR but also through Internet, the computer world's international "network of networks."

Hackers, scholars, librarians and others called in from California, Sweden, Wisconsin and elsewhere to testify that computer networking had enriched their lives. So many called, in fact, that Flatow believes parts of the Internet were clogged, causing callers' voices to break up intermittently.

Listening to radio over your $10,000 computer may be somewhat impractical, Flatow says, but the experiment illustrated how an enormous special-interest audience can be assembled on short notice through the existing Internet infostructure.

Wants to join NPR

Malamud not only has incorporated his radio network—Internet Multicasting Corp.—but is seeking nonprofit status and

Internet radio

Continued from page 1

admits a desire to become "a public telecommunications entity" and an NPR affiliate.

Since it signed on March 31, the network has begun distributing:

- Malamud's own talk show, *Geek of the Week*, in which he interviews computer experts on hyperadvanced topics (Microsoft whiz-plutocrat Bill Gates "doesn't know enough" to be a guest),
- the independently produced public radio show *TechNation* (which brought Malamud to the Public Radio Conference earlier this month),
- the National Press Club luncheon speeches (via a high-speed digital line he had put into the press club building in Washington), and
- *Internet Town Hall*, which has featured such events as a visit with the Dalai Lama and a hearing about multimedia held by the House telecommunications subcommittee.

Malamud estimates that *Geek of the Week* has a 100,000 listeners, judging from indirect evidence (no Arbitrons are available), and he relies on corporate underwriters like Sun Microsystems to cover costs. (The federal backbone of Internet has anticommercial rules, but Malamud says National Science Foundation and NASA officials have cleared his underwriting blurbs.)

The network founder is a networking architect and technical writer—he has written seven computer books, including *Exploring the Internet* (PTR Prentice Hall, 1992)—who was disappointed in the quality of the computer trade press and wanted to start his own publication.

Startup and printing costs were too high for a paper magazine, however. And he wouldn't be doing a favor to computer folks if he gave them a new on-line text newsletter because they're already swamped with e-mail messages.

Listening to radio over your $10,000 computer may be somewhat impractical, Flatow says, but the experiment illustrated how an enormous special-interest audience can be assembled on short notice through the existing Internet infostructure.

So Malamud decided to do live radio over the network, and added audio gear to his home office in Alexandria, Va. "For under $100,000 I was able to put together a radio station that reaches 26 different countries on the day that it goes on the air," he said on *TechNation*. "Anybody can be a radio station."

Just don't touch the ads

"Desktop broadcasting," as Malamud calls it, gives small organizations enormous reach. One reason he can afford to start an international network on his own is that the infostructure already exists, and most of the transmission costs come out of somebody else's pocket. He simply transmits his half-hour program in a 15-megabyte audio file to a major network node nearby in the Virginia suburbs of Washington, D.C. Operators of networks in Europe, Japan and elsewhere pick it up from there. People who want to hear Malamud's programs seek them out electronically at the nearest network node, and the service bill goes to their employers, which often benefit from federal network subsidies.

One fan breaks up the program into audio tidbits and puts it on his company's voice mail system. And some intermediaries do other listeners a favor, squeezing down the volume of data by running it through their equipment to reduce the digital audio sampling rate.

Malamud doesn't mind when people edit or rearrange his shows downstream, he said in an interview on *TechNation*. "The only thing I don't let you do is take out my ads and put yours in."

Not every computer user could receive and talk back to talk radio, of course. You need sound equipment and a modem or a digital network line connected to your computer. And lowly computer users with ordinary 2400 bits-per-second modems can't listen live; they have to capture the shows on disc for later playback, because it will take 12 hours to get the half-hour program through their modems.

But listeners who have broadband connections with Internet capable of carrying 64,000 bits per second can pull in Malamud's shows live.

Malamud predicts that when computer networks generally reach that capacity and today's electronic "two-lane roads" become the "information superhighways" that Vice President Gore is touting, audio and video and other multimedia usage of the networks will explode.

Though this month's *Talk of the Nation* broadcast was a first for a two-way talk show, Flatow says his show had gone out by Internet at least once before, last year, though it was a one-way connection.

He didn't know people were listening on their computers until someone phoned to ask: "Did you know you were on the Internet in Europe?" Whereupon Flatow recalls that he (like any good broadcaster) immediately inquired, "Where did you get the rights?" ■

THE PUBLIC TELECOMMUNICATIONS NEWSPAPER

Current

May 31, 1993 Vol. XII, No. 10

Flatow's talk show marks a digital first

Multitudes tune in their computers; guest transmits radio via Internet

By Steve Behrens

The other day, in yet another sudden demonstration of media convergence, thousands of people apparently listened to NPR's *Talk of the Nation* on their computers.

Ira Flatow, host of the Friday science edition of the talk show, knows there were lots of computer listeners because some 400 of them queued up to talk back to him—through microphones attached to their computers—and hundreds of others sent text messages by electronic mail (address: IRA@RADIO.COM).

It was a first for live two-way talk radio, said Carl Malamud, founder of a one-man computer radio network, who was Flatow's guest May 21. "In terms of hooking up the land of the radio to the land of the computer network, it's the first time it's ever been done," he claimed.

The show not only went out over NPR but also through Internet, the computer world's international "network of networks."

Hackers, scholars, librarians and others called in from California, Sweden, Wisconsin and elsewhere to testify that computer networking had enriched their lives. So many called, in fact, that Flatow believes parts of the Internet were clogged, causing callers' voices to break up intermittently.

Listening to radio over your $10,000 computer may be somewhat impractical, Flatow says, but the experiment illustrated how an enormous special-interest audience can be assembled on short notice through the existing Internet infostructure.

Wants to join NPR

Malamud not only has incorporated his radio network—Internet Multicasting Corp.—but is seeking nonprofit status and

Internet radio

Continued from page 1

admits a desire to become "a public telecommunications entity" and an NPR affiliate.

Since it signed on March 31, the network has begun distributing:

- Malamud's own talk show, *Geek of the Week*, in which he interviews computer experts on hyperadvanced topics (Microsoft whiz-plutocrat Bill Gates "doesn't know enough" to be a guest),
- the independently produced public radio show *TechNation* (which brought Malamud to the Public Radio Conference earlier this month),
- the National Press Club luncheon speeches (via a high-speed digital line he had put into the press club building in Washington), and
- *Internet Town Hall*, which has featured such events as a visit with the Dalai Lama and a hearing about multimedia held by the House telecommunications subcommittee.

Malamud estimates that *Geek of the Week* has a 100,000 listeners, judging from indirect evidence (no Arbitrons are available), and he relies on corporate underwriters like Sun Microsystems to cover costs. (The federal backbone of Internet has anticommercial rules, but Malamud says National Science Foundation and NASA officials have cleared his underwriting blurbs.)

The network founder is a networking architect and technical writer—he has written seven computer books, including *Exploring the Internet* (PTR Prentice Hall, 1992)—who was disappointed in the quality of the computer trade press and wanted to start his own publication.

Startup and printing costs were too high for a paper magazine, however. And he wouldn't be doing a favor to computer folks if he gave them a new on-line text newsletter because they're already swamped with e-mail messages.

Listening to radio over your $10,000 computer may be somewhat impractical, Flatow says, but the experiment illustrated how an enormous special-interest audience can be assembled on short notice through the existing Internet infostructure.

So Malamud decided to do live radio over the network, and added audio gear to his home office in Alexandria, Va. "For under $100,000 I was able to put together a radio station that reaches 26 different countries on the day that it goes on the air," he said on *TechNation*. "Anybody can be a radio station."

Just don't touch the ads

"Desktop broadcasting," as Malamud calls it, gives small organizations enormous reach. One reason he can afford to start an international network on his own is that the infostructure already exists, and most of the transmission costs come out of somebody else's pocket. He simply transmits his half-hour program in a 15-megabyte audio file to a major network node nearby in the Virginia suburbs of Washington, D.C. Operators of networks in Europe, Japan and elsewhere pick it up from there. People who want to hear Malamud's programs seek them out electronically at the nearest network node, and the service bill goes to their employers, which often benefit from federal network subsidies.

One fan breaks up the program into audio tidbits and puts it on his company's voice mail system. And some intermediaries do other listeners a favor, squeezing down the volume of data by running it through their equipment to reduce the digital audio sampling rate.

Malamud doesn't mind when people edit or rearrange his shows downstream, he said in an interview on *TechNation*. "The only thing I don't let you do is take out my ads and put yours in."

Not every computer user could receive and talk back to talk radio, of course. You need sound equipment and a modem or a digital network line connected to your computer. And lowly computer users with ordinary 2400 bits-per-second modems can't listen live; they have to capture the shows on disc for later playback, because it will take 12 hours to get the half-hour program through their modems.

But listeners who have broadband connections with Internet capable of carrying 64,000 bits per second can pull in Malamud's shows live.

Malamud predicts that when computer networks generally reach that capacity and today's electronic "two-lane roads" become the "information superhighways" that Vice President Gore is touting, audio and video and other multimedia usage of the networks will explode.

Though this month's *Talk of the Nation* broadcast was a first for a two-way talk show, Flatow says his show had gone out by Internet at least once before, last year, though it was a one-way connection.

He didn't know people were listening on their computers until someone phoned to ask: "Did you know you were on the Internet in Europe?" Whereupon Flatow recalls that he (like any good broadcaster) immediately inquired, "Where did you get the rights?" ■